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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,800	09/26/2003	Margaret Ann Bernal	SVL920030038US1	2626

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EXAMINER

MYINT, DENNIS Y

ART UNIT PAPER NUMBER

2162

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/676,800

Applicant(s)

BERNAL ET AL.

Examiner

Dennis Myint

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09/26/2003</u>  | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Claims 1-38 have been examined.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claim 1-4, 9-13, 18-22, 27-31, 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaluskar et al. (U.S. Patent Number 6985904) in view of Crone et al. (U.S. Patent Number 6249783).

Referring to claim 1, Kaluskar et al. is directed to a method and system for reusing execution plans and cursors comprising:

when executing a statement, comparing the SQL statement presently being processed with an existing cursor which corresponds to a first SQL statement (Kaluskar et al., Column 3 Line 65 through Column 4 Line 6, i.e. "In this approach, the matching step 210 of Fig. 2 is accomplished if an existing cursor corresponds to a first SQL statement that exactly matches the SQL statement presently being processed." and Column 3 Line 39-45, i.e. "The systems and methods for sharing of execution plans for similar SQL statements overcome the disadvantages discussed above by reusing the execution plan of an existing cursor in those situations where a client issues a SQL statement similar to another SQL statement previously compiled."); and

when there is a match between the SQL statement presently being processed with an existing cursor which corresponds to a first SQL statement, executing the statement with the execution plan of the existing cursor (Kaluskar et al., Column 4 Line 3-6, i.e. "If so, a soft parse is preformed, and then the execution plan of the existing cursor is shared/reused for the current SQL statement to void performing a hard parse").

Note that Kaluskar et al. discloses that type conversion is involved a hard parse (Kaluskar et al. Column 2 Line 62 through Column 3 Line 2, i.e. "The type checking stage 125 engages data type resolution between a client process and a server process, which verifies and corrects data type incompatibilities that can exist.") and the result of a hard parsing process is a data structure in the memory which dictates to the server the best method for carrying out the database statement request (Kaluskar et al., Column 3 Line 15-26). A cursor is one example of such a data structure and that is a handle to the

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memory location where the details and results of a parsed and optimized database statement resides (Kaluskar et al., Column 3 Line 15-26). Therefore it is inherent that type conversion information (optimization information in a bind-in structure) is also included in the said data structure. However, Kaluskar et al. does not explicitly disclose that type conversion information is included in the recycled/reused execution plan of an existing cursor.

On the other hand, Crone et al. teaches a method and system for efficiently executing built-in functions, wherein function modules are defined and each function module processes a single class of functions, where a class is a group of data types (Crone et al., Column 5 Line 24-57). And said function modules could convert data types (Crone et al., Column 5 Line 24-57).

At the time the invention was made, it would have been obvious to a person of ordinary to combine the method and system of Kaluskar et al. for reusing execution plans/cursors with the method and system taught by Crone et al. for type conversions employing function modules so that, when executing a statement, the combined method and system would constitute a parameter binding method and system which compares data in an application structure of the statement with optimization information in bind-in structure ("a memory resident data structure", Kaluskar et al. Column 3 Line 15-21) and, when there is a match, would execute the statement with optimization information (i.e. using an existing execution plan of an existing cursor). One would have been motivated to do so in order that "to optimize the operations on a specific data type" (Crone et al.

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Column 5 Line 44-46. i.e. "The motivation for this organization is to optimize the operations on a specific data type").

Referring to claim 2, the method and system of Kaluskar et al. in view of Crone et al. as discussed above with regard to claim 1 discloses the invention as claimed. See Column 3 Line 57-64 of Kaluskar et al.'s specification for this disclosure (i.e. "If a match is not found, then compilation proceeds as in Fig. 1"). Therefore, the method and system of Kaluskar et al. in view of Crone et al. as applied to claim 1 further comprises, when there is not a match between the data in the application structure and the optimization information, regenerating optimization information.

Referring to claim 3, the method and system of Kaluskar et al. in view of Crone et al. as discussed above with regard to claim 1 discloses the invention as claimed. The method and system of Kaluskar et al. in view of Crone et al. as applied to claim 1 further comprises, at bind time, storing the optimization information in the bind-in structure ("a memory resident data structure", Kaluskar et al. Column 3 Line 15-21).

Referring to claim 4, the method and system of Kaluskar et al. in view of Crone et al. as discussed above with regard to claim 1 discloses the invention as claimed. Kaluskar et al. in view of Crone et al. is directed to the method of claim 1, wherein the optimization information includes at least one of data type, length, Coded Character Set Identifier, an array size, an indication of whether conversions are required, and an indication of whether the required conversions are valid (Kaluskar et al. Column 2 Line 62 through Column 3 Line 2, i.e. "The type checking stage 125 engages data type

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resolution between a client process and a server process, which verifies and corrects data type incompatibilities that can exist.” and Crone et al., Column 5 Line 24-57).

Referring to claim 9, the method and system of Kaluskar et al. in view of Crone et al. as discussed above with regard to claim 1 discloses the invention as claimed. See Column 3 Line 57-64 of Kaluskar et al.’s specification for this disclosure (i.e. “If a match is not found, then compilation proceeds as in Fig. 1”). Note that when a stored procedure returns a cursor to a result set to an application, said cursor will be a new cursor in the method and system of Kaluskar et al. in view of Crone et al. and it would have been calculated/generated as new following the conventional way of hard parsing. In the specification of this application, such situation arises when the caller of the stored procedure is a distributed application, which does not provide a SQLDA (Specification, Paragraph 0074).

Claim 9, 10, 11, 12, 13, and 18 are rejected on the same basis as claim 1, 2, 3, 4, and 9 respectively.

Claim 19, 20, 21, 22, and 27 are rejected on the same basis as 1, 2, 3, 4, and 9 respectively.

Claim 28, 29, 30, 31, and 36 are rejected on the same basis as 1, 2, 3, 4, and 9 respectively.

Claim 37 and 38 are rejected on the same basis as claim 1.

3. Claim 5, 14, 23, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaluskar et al. in view of Crone et al. and further in view of Desai et al. (U.S. Patent Number 6567816).

Referring to claim 5, Kaluskar et al. in view of Crone et al. as applied to claim 1 above does not explicitly disclose the use of pointer increments to calculate location of next data value. However, Desai et al. teaches a method and system for extracting data from database records, wherein offsets from the starting of the row in memory are used to determine corresponding column name by adding to the said column offset the length of fixed columns (Desai et al., Column 5 Line 34-49).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art of add the feature of employing offsets (increments) to locate (point to) next column (item/record) as taught by Desai et al. to the method and system taught by Kaluskar et al. in view of Crone et al. so that the resultant method would constitute the method of claim 1, which further comprises, for fixed length data, storing an increment length by which a data pointer that is pointing to data in an application program area is to be incremented to find a location of a next data value and calculating the location of the next data value by adding the increment length to the data pointer. One would have been motivated to do so simply to locate a memory location, which is well known in the art.

Claim 14, 23, and 32 are rejected on the same basis as claim 5.

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4. Claim 6-8, 15-17, and 24-26, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaluskar et al. in view of Crone et al. and further in view of Jordan II et al. (U.S. Patent Number 5875442).

Referring to claim 6, Kaluskar et al. in view of Crone et al. as applied to claim 1 above does not explicitly disclose calculating the location of data in a client communication buffer. However, Jordan II et al., teaches a method and system for accessing a remote database, wherein location of data in communication buffer are calculated (Jordan II et al. Figure 3 and Column 4 Line 12-29).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of calculating memory location in a communication buffer as taught by Jordan II. et al. to the method and system of Kaluskar et al. in view of Crone et al. as applied to claim 1 above so that the resultant method would further comprise, for distributed processing, at a client computer, calculating a location of data in a client communications buffer. One would have been motivated to do so in order to "provide dynamic buffering to enhance a database server" (Jordan II et al., Column 1 Line 26-29).

Claim 7 and 8 are rejected on the same basis as claim 6.

Claims 15-17 are rejected on the same basis claim 6-8 respectively.

Claims 24-26 are rejected on the same basis claim 6-8 respectively.

Claims 33-35 are rejected on the same basis claim 6-8 respectively.

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**Conclusion**

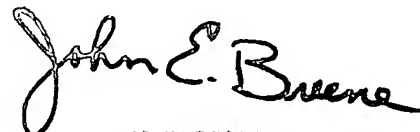
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Myint whose telephone number is (571) 272-5629. The examiner can normally be reached on 8:30AM-5:30PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dennis Myint

AU-2162



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